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FROM:	**D. Scott Juneau KRAMER & AMADO, P.C.**
DATE:	**March 9, 2006**
SUBJECT:	**U.S. Patent Application Title: WIDEBAND SIGNAL TRANSMISSION SYSTEM Serial No.: 10/047,032 Attorney Docket No.: NL 010054**
PAGES:	**INCLUDING COVER PAGE (58)**

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Application Number	10/047,032
Filing Date	January 15, 2002
First Named Inventor	Andreas Johannes Gerrits
Art Unit	2654
Examiner Name	Paul V. Harper
Attorney Docket Number	NL 010054

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☐ Applicant claims small entity status. See 37 CFR 1.27

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Application Number	10/047,032
Filing Date	January 15, 2002
First Named Inventor	Andreas Johannes Gerrits
Examiner Name	Paul V. Harper
Art Unit	2654
Attorney Docket No.	NL 010054

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Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
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Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

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☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($)	500.00

Complete if Known	
Application Number	10/047,032
Filing Date	January 15, 2002
First Named Inventor	Andreas Johannes Gerrits
Examiner Name	Paul V. Harper
Art Unit	2654
Attorney Docket No.	NL 010054

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Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims _____ - 20 or HP = _____ x _____ = _____ Fee Paid ($)

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Signature	D Scott	Registration No. (Attorney/Agent) 39,243	Telephone 703-519-9801
Name (Print/Type)	D. Scott Juneau		Date 3/9/2006

PATENT

IN THE UNITED STATE PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:	:	Andreas Johannes Gerrits
For	:	WIDEBAND SIGNAL TRANSMISSION SYSTEM
Serial No.	:	10/047,032
Filed	:	January 15, 2002
Art Unit	:	2654
Examiner	:	Paul V. Harper
Attorney Docket No.	:	NL 010054
Confirmation No.	:	4253

APPEAL BRIEF

Mail Stop Appeal Brief -- Patents
Commissioner for Patents
P.O. Box 1450
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Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed January 11, 2006.

I. REAL PARTY IN INTEREST

The party in interest is the assignee, PHILIPS ELECTRONICS NORTH AMERICA CORPORATION. The assignment document is recorded at Reel 012699 and Frame 0528.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences.

III. STATUS OF CLAIMS

This is an appeal from the Final Office Action dated October 20, 2005 rejecting claims 1, 2, 4-6, 8-10, 12-14, 16-18, and 20. No other claims are pending in the application. The claims being appealed are claims 1, 2, 4-6, 8-10, 12-14, 16-18, and 20.

IV. STATUS OF AMENDMENTS

An amendment under 37 CFR §1.116 was filed by the Appellant on December 7, 2005. This amendment was filed for clarification purposes, and to remove reference numerals from the claims, and was intended to put the claims in better form for Appeal. Specifically, by this amendment claim 1 was amended to recite combination of first and second decoded frequency band signals into a single output signal (line 21 of the claim). Similar amendments were made to claims 5, 9, 13, and 17. Also, claim 17 was amended to recite that first and second encoded frequency band signals are derived from a single input speech signal (line 3 of the claim). This amendment has not been entered by the Examiner.

The copy of appealed claims 1-20 is presented without entry of the 1.116 amendment.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates to a transmission system comprising a transmitter for transmitting an input signal to a receiver. The transmitter comprises a splitter for splitting up the input signal into at least first and second frequency band signals. The transmitter further comprises a first encoder for encoding the first frequency band signal into a first encoded frequency band signal and a second encoder for encoding the second frequency band signal into

a second encoded frequency band signal. The receiver comprises a first decoder for decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder for decoding the second encoded frequency band signal into a second decoded frequency band signal. The receiver combines the first and second decoded frequency band signals into an output signal and reconstructs the second decoded frequency band signal when the second decoded frequency band signal is not available. Errors occurring in the receipt or decoding of the second frequency band signal can be concealed by reconstructing the missing parts on the basis of the first frequency band signal which was received and decoded correctly.

Claim 1 (independent)

The transmission system, as claimed in independent claim 1, comprises a transmitter (Fig. 1, Ref. 12) for transmitting an input signal to a receiver (Fig. 1, Ref. 14) via a transmission channel (Fig. 1, Ref. 16), the transmitter comprising a splitter (Fig. 1, Ref. 20) for splitting up a single input signal on a single input line (Fig. 1, Ref. 18) into at least first and second frequency band signals (Page 5, lines 25-27), the transmitter further comprising a first encoder (Fig. 1, Ref. 22) for encoding the first frequency band signal into a first encoded frequency band signal and a second encoder (Fig. 1, Ref. 24) for encoding the second frequency band signal into a second encoded frequency band signal. The transmitter transmits the first and second encoded frequency band signals via the transmission channel to the receiver (Page 5, lines 27-32).

The receiver comprises a first decoder (Fig. 1, Ref. 26) for decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder (Fig. 1, Ref. 28) for decoding the second encoded frequency band signal into a second decoded

frequency band signal, the receiver further comprising a combiner (Fig. 1, Ref. 30) for combining the first and second decoded frequency band signals into an output signal (Page 5, line 32-Page 6, line 6). The receiver further comprises reconstruction means (Fig. 2, Ref. 48) for reconstructing the second decoded frequency band signal when he second decoded frequency band signal is not available. The reconstruction means are arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band signal (Page 8, lines 3-15).

The reconstruction means is a means plus function element of claim 1. As required in 35 U.S.C. §112, paragraph 6, the corresponding structure is described in the specification on page 8, lines 3-15.

Claim 3 (dependent)

The transmission system, as claimed in dependent claim 3, includes all the limitations of claim 1 as described above. Claim 3 further characterizes the transmission system of claim 1 in that the reconstruction means is arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal (Page 8, lines 11-15).

Claim 5 (independent)

Independent claim 5 is directed to a receiver for receiving, via a transmission channel, first and second encoded frequency band signals derived from a single input signal from a transmitter. The receiver, as claimed in claim 5, comprises a first decoder (Fig. 1, Ref. 26) for

decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder (Fig. 1, Ref. 28) for decoding the second encoded frequency band signal into a second decoded frequency band signal, the receiver further comprising a combiner (Fig. 1, Ref. 30) for combining the first and second decoded frequency band signals into an output signal (Page 5, line 32-Page 6, line 6). The receiver further comprises a reconstruction means (Fig. 2, Ref. 48) for reconstructing the second decoded frequency band signal when the second decoded frequency band signal is not available, characterized in that the reconstruction means is arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band signal (Page 8, lines 3-15).

The reconstruction means is a means plus function element of claim 5. As required in 35 U.S.C. §112, paragraph 6, the corresponding structure is described in the specification on page 8, lines 3-15.

Claim 7 (dependent)

The receiver, as claimed in dependent claim 7, includes all the limitations of claim 5 as described above. Claim 7 further characterizes the receiver of claim 5 in that the reconstruction means is arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal (Page 8, lines 11-15).

Claim 9 (independent)

Independent claim 9 is directed to a method of transmitting a single input signal via a

transmission channel. The method, as claimed in claim 9, comprises the steps of splitting up the single input signal into at least first and second frequency band signals (Page 5, lines 25-27), encoding the first frequency band signal into a first encoded frequency band signal and encoding the second frequency band signal into a second encoded frequency band signal (Page 7, lines 1-10), transmitting the first and second encoded frequency band signals via the transmission channel (Page 7, lines 11-14), decoding the first encoded frequency band signal into a first decoded frequency band signal and decoding the second encoded frequency band signal into a second decoded frequency band signal (Page 7, lines 15-25), combining the first and second decoded frequency band signals into an output signal (Page 6, lines 12-14), and reconstructing the second decoded frequency band signal when the second decoded frequency band signal is not available (Page 8, lines 3-15). The method of claim 9 is characterized in that the second decoded frequency band signal is reconstructed from the first decoded frequency band signal (Page 8, lines 3-15).

Claim 11 (dependent)

The method of transmitting an input signal via a transmission channel, as claimed in dependent claim 11, includes all the limitations of claim 9 as described above. Claim 11 further characterizes the method of claim 9 in that a present frame of the second decoded frequency band signal is reconstructed from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal (Page 8, lines 11-15).

Claim 13 (independent)

Independent claim 13 is directed to a method of receiving, via a transmission channel, first and second encoded frequency band signals derived from a single input signal. The method, as claimed in claim 13, comprises the steps of decoding the first encoded frequency band signal into a first decoded frequency band signal and decoding the second encoded frequency band signal into a second decoded frequency band signal (Page 7, lines 15-25); combining the first and second decoded frequency band signals into an output signal (Page 6, lines 12-14); and reconstructing the second decoded frequency band signal when the second decoded frequency band signal is not available (Page 8, lines 3-15). The method of claim 9 is characterized in that the second decoded frequency band signal is reconstructed from the first decoded frequency band signal (Page 8, lines 3-15).

Claim 15 (dependent)

The method of receiving, via a transmission channel, first and second encoded frequency band signals derived from a single input signal, as claimed in dependent claim 13, includes all the limitations of claim 9 as described above. Claim 15 further characterizes the method of claim 13 in that a present frame of the second decoded frequency band signal is reconstructed from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal (Page 8, lines 11-15).

Claim 17 (independent)

Independent claim 17 is directed to a speech decoder (Fig. 2, Ref. 60) for decoding first and second encoded frequency band speech signals derived from a single input signal (Page 7, lines 15-25). The speech decoder comprises a first decoder (Fig. 2, Ref. 26) for decoding the first encoded frequency band speech signal into a first decoded frequency band speech signal and a second decoder (Fig. 2, Ref. 28) for decoding the second encoded frequency band speech signal into a second decoded frequency band speech signal (Page 7, lines 15-25). The speech decoder further comprises a combiner for combining the first and second decoded frequency band speech signals into an output signal (Page 7, lines 26-31), and a reconstruction means (Fig. 2, Ref. 48) for reconstructing the second decoded frequency band speech signal when the second decoded frequency band signal is not available. The reconstruction means is arranged for reconstructing the second decoded frequency band speech signal from the first decoded frequency band speech signal (page 8, lines 3-15).

The reconstruction means is a means plus function element of claim 5. As required in 35 U.S.C. §112, paragraph 6, the corresponding structure is described in the specification on page 8, lines 3-15.

Claim 19 (dependent)

The speech decoder, as claimed in dependent claim 19, includes all the limitations of claim 17 as described above. Claim 19 further characterizes the speech decoder of claim 17 in that the reconstruction means are arranged for reconstructing a present frame of the second decoded frequency band speech signal from a present frame of the first decoded frequency band speech signal and from a previous frame of the second decoded frequency band speech signal

(Page 8, lines 11-15).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A.. Claims 1, 2, 4-6, 8-10, 12-14, and 16-18 stand rejected under 35 U.S.C. §102(e) as being unpatentable over US Patent No. 6,137,915 to Chai et al. ("Chai").

B. Claims 3, 7, 15 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chai in view of US Patent No. 5,384,793 to Zinser et al. ("Zinser").

VII. ARGUMENT

In the Final Office Action the Examiner rejected all independent claims (i.e. claims 1, 5, 13, and 17) under 35 U.S.C. §102(e) as being anticipated by Chai.

The test for anticipation under section 102 is whether each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP §2131. The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Circ. 1989); MPEP §2131. The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Appellant will show that the prior art reference cited by the Examiner does not teach all the claim limitations, as recited in each of the independent Claims 1, 5, 13, and 17, and consequently in any of their respective dependent claims.

A. Rejection of Claims 1, 2, 4-6, 8-10, 12-14, and 16-18 under 35 U.S.C. §102(e)

Claims 1, 2, 4-6, 8-10, 12-14, and 16-18 stand rejected under 35 U.S.C. §102(e) as being unpatentable over US Patent No. 6,263,507 to Chai et al. ("Chai").

Claim 1

One of the features of the present invention, as claimed in claim 1, is the transmitter comprising a splitter for splitting up a single input signal on a single input line into at least first and second frequency band signals, a first encoder for encoding the first frequency band signal into a first encoded frequency band signal and a second encoder for encoding the second frequency band signal into a second encoded frequency band signal. Appellant submits that, in the current invention, in order for the first and second frequency band signals to be encoded by separate encoders, the splitter splits up the input signal prior to encoding of the frequency band signals at the first and second encoders. A second feature of the present invention, as claimed in claim 1, is a first decoder for decoding the first encoded frequency band signal and a second decoder for decoding the second encoded frequency band signal, and a combiner for combining first and second decoded frequency band signals

Chai discloses that generation of hierarchical subband decomposed coefficients takes place at the encoders (Col. 3, lines 30-33). In the Advisory Action dated December 27, 2005, the Examiner asserted that the subband encoding step of Chai performs a necessary step of splitting a signal into frequency bands. According to the Examiner, "Chai teaches splitting of the input signal resulting in coefficients corresponding to separate bands, where... each of the sets of coefficients will undergo a separate formatting operation (encoding) during packetization (Pages

2-3 of the Advisory Action)." The Examiner therefore appears to argue that the input signal(s) of Chai undergoes splitting at encoders 220 and 222 (shown in Fig. 2), with subsequent encoding at packetizers 230.

Appellant notes that, as set forth in MPEP § 2173.05(a), "[I]t has been stated that consistent with the well-established axiom in patent law that a patentee is free to be his or her own lexicographer, a patentee may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings. Hormone Research Foundation Inc. v. Genentech Inc., 904 F.2d 1558, 15 USPQ2d 1039 (Fed. Cir. 1990)." Chai defines encoders 220 and 220 as devices "for receiving and encoding [audio or video] data into an elementary... bitstream (Col. 3, lines 28-30; 54-56)." Chai further defines packetizers 230 as devices where the elementary bitstreams generated by the encoders are converted into packets (Col. 3, lines 65-67). Thus, the term "packetizer," as used by Chai, is distinctly different from the term "encoder." Therefore, Appellant argues that a step of packetization, as described by Chai, falls outside the meaning of encoding, as defined by Chai.

Since the packetizer is not an encoder within the meaning of Chai, any step of splitting of the input signal resulting in coefficients corresponding to separate bands clearly takes place at the encoder 220 of Chai (Col. 3, lines 28-44), and not prior to the encoders of Chai. Therefore, Chai fails to show a splitter for splitting up a single input signal on a single input line into at least first and second frequency band signals, a first encoder for encoding the first frequency band signal, and a second encoder for encoding the second frequency band signal, as recited in claim 1.

Further, Chai fails to show a combiner for combining the first and second decoded frequency band signals, as recited in claim 1, where the first and second decoded frequency band signals are generated by separate decoders. Chai discloses that a transport stream may be demultiplexed at a demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and 295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's specification as a device for decoding an encoded frequency band signal. Thus, the term "combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing

decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder, and would therefore, by implication, be reversed at a decoder. There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no suggestion to combine these signals into a single output. Therefore, Chai fails to show a first decoder for decoding the first frequency band signal, and a second decoder for decoding the second frequency band signal, with a combiner for combining at least first and second decoded frequency band signals, as recited in claim 1.

Accordingly, claim 1 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently.

Claims 2 and 4

Appellant incorporates herein by reference the arguments presented above against the rejection of claim 1 under 35 U.S.C. §102(e) over Chai. Claims 2 and 4 depend from claim 1 and accordingly are allowable for at least this reason.

Claim 5

One of the features of the present invention, as claimed in claim 5, is the receiver comprising a first decoder for decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder for decoding the second encoded frequency band signal into a second decoded frequency band signal, the receiver further comprising a combiner for combining the first and second decoded frequency band signals into an output signal.

Chai fails to show a step of combining the first and second decoded frequency band signals, as recited in claim 5, where the first and second decoded frequency band signals are generated by separate decoders. Chai discloses that a transport stream may be demultiplexed at a demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and 295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present

application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's specification as a device for decoding an encoded frequency band signal. Thus, the term "combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that decoded signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder which is capable of hierarchical subband decomposition (Col. 3, lines 28-34; Col. 4, lines 31-42), and would therefore, by implication, be reversed at a complementary decoder (Col. 8, lines 54-59). There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no suggestion to combine these signals into a single output. Therefore, Chai fails to show a first decoder for decoding the first frequency band signal, and a second decoder for the second frequency band signal, with a combiner for combining at least first and second decoded frequency band signals, as recited in claim 5.

Accordingly, claim 5 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently.

Claims 6 and 8

Appellant incorporates herein by reference the arguments presented above against the rejection of claim 5 under 35 U.S.C. §102(e) over Chai. Claims 6 and 8 depend from claim 5 and accordingly are allowable for at least this reason.

Claim 9

One of the features of the present invention, as claimed in claim 9, is the method of transmitting a single input signal via a transmission channel. The method comprises the steps of splitting up the single input signal into at least first and second frequency band signals; and encoding the first frequency band signal into a first encoded frequency band signal and encoding the second frequency band signal into a second encoded frequency band signal. Appellant submits that, in the current invention, in order for the first and second frequency band signals to be separately encoded, the input signal must have been split up prior to encoding the first frequency band signal into a first encoded frequency band signal and encoding the second frequency band signal into a second encoded frequency band signal. A second feature of the present invention, as claimed in claim 9, is a step of decoding the first encoded frequency band signal into a first decoded frequency band signal and decoding the second encoded frequency band signal into a second decoded frequency band signal (Page 7, lines 15-25), with a subsequent step combining the first and second decoded frequency band signals into an output signal

Chai discloses that generation of hierarchical subband decomposed coefficients takes place at the encoders (Col. 3, lines 30-33). In the Advisory Action dated December 27, 2005, the

Examiner asserted that the subband encoding step of Chai performs a necessary step of splitting a signal into frequency bands. According to the Examiner, "Chai teaches splitting of the input signal resulting in coefficients corresponding to separate bands, where... each of the sets of coefficients will undergo a separate formatting operation (encoding) during packetization (Pages 2-3 of the Advisory Action)." The Examiner therefore appears to argue that the input signal(s) of Chai undergoes splitting at encoders 220 and 222 (shown in Fig. 2), with subsequent encoding at packetizers 230. Appellant submits that, in the current invention, in order for the first and second frequency band signals to be encoded by separate encoders, the splitter splits up the input signal prior to encoding of the frequency band signals at the first and second encoders.

Appellant notes that, as set forth in MPEP § 2173.05(a), "[I]t has been stated that consistent with the well-established axiom in patent law that a patentee is free to be his or her own lexicographer, a patentee may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings. Hormone Research Foundation Inc. v. Genentech Inc., 904 F.2d 1558, 15 USPQ2d 1039 (Fed. Cir. 1990)." Chai defines encoders 220 and 220 as devices "for receiving and encoding [audio or video] data into an elementary... bitstream (Col. 3, lines 28-30; 54-56)." Chai further defines packetizers 230 as devices where the elementary bitstreams generated by the encoders are converted into packets (Col. 3, lines 65-67). Thus, the term "packetizer," as used by Chai, is distinctly different from the term "encoder." Therefore, Appellant argues that a step of packetization, as described by Chai, falls outside the meaning of encoding, as defined by Chai.

Since the packetizer is not an encoder within the meaning of Chai, any step of splitting of the input signal resulting in coefficients corresponding to separate bands clearly takes place at

the encoder 220 of Chai (Col. 3, lines 28-44), and not prior to the encoders of Chai. Therefore, Chai fails to show a step of splitting up a single input signal on a single input line into at least first and second frequency band signals, a step of encoding the first frequency band signal, and a second step of encoding the second frequency band signal, as recited in claim 9.

Further, Chai fails to show a combiner for combining the first and second decoded frequency band signals, as recited in claim 9, where the first and second decoded frequency band signals are generated by separate decoders. Chai discloses that a transport stream may be demultiplexed at a demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and 295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's

specification as a device for decoding an encoded frequency band signal. Thus, the term "combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder, and would therefore, by implication, be reversed at a decoder. There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no suggestion to combine these signals into a single output. Therefore, Chai fails to show a first decoder for decoding the first frequency band signal, and a second decoder for decoding the second frequency band signal, with a combiner for combining at least first and second decoded frequency band signals, as recited in claim 9.

Accordingly, claim 9 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently.

Claims 10 and 12

Appellant incorporates herein by reference the arguments presented above against the rejection of claim 9 under 35 U.S.C. §102(e) over Chai. Claims 10 and 12 depend from claim 9 and accordingly are allowable for at least this reason.

Claim 13

One of the features of the present invention, as claimed in claim 13, is a method of receiving, via a transmission channel, first and second encoded frequency band signals derived from a single input signal. The method, as claimed in claim 13, comprises the steps of decoding the first encoded frequency band signal into a first decoded frequency band signal and decoding the second encoded frequency band signal into a second decoded frequency band signal (Page 7, lines 15-25); and combining the first and second decoded frequency band signals into an output signal (Page 6, lines 12-14).

Contrary to the Examiner's assertion, Chai fails to show a step of combining the first and second decoded frequency band signals, as recited in claim 1, where the first and second decoded frequency band signals are generated in separate decoding steps. Chai discloses that a transport stream may be demultiplexed at a demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and

295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's specification as a device for decoding an encoded frequency band signal. Thus, the term "combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder, and would therefore, by implication, be reversed at a decoder. There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no

suggestion to combine these signals into a single output. Therefore, Chai fails to show a step of decoding the first frequency band signal, and a step of for decoding the second frequency band signal, with a step of combining at least first and second decoded frequency band signals, as recited in claim 13.

Accordingly, claim 13 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently.

Claims 14 and 16

Appellant incorporates herein by reference the arguments presented above against the rejection of claim 13 under 35 U.S.C. §102(e) over Chai. Claims 14 and 16 depend from claim 9 and accordingly are allowable for at least this reason.

Claim 17

One of the features of the present invention, as claimed in claim 17, is the speech decoder comprising a first decoder for decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder for decoding the second encoded frequency band signal into a second decoded frequency band signal. The speech decoder further comprises a combiner for combining the first and second decoded frequency band speech signals into an output signal

Chai fails to show a combiner for combining the first and second decoded frequency band signals, as recited in claim 17, where the first and second decoded frequency band signals are generated by separate decoders. Chai discloses that a transport stream may be demultiplexed at a

demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and 295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's specification as a device for decoding an encoded frequency band signal. Thus, the term "combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder, and would therefore, by implication, be reversed at a complementary decoder. There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no suggestion to combine these signals into a single output. Therefore, Chai fails to show a first decoder for decoding the first frequency band signal, and a second decoder for decoding the second frequency band signal, with a combiner for combining at least first and second decoded frequency band signals, as recited in claim 17.

Accordingly, claim 17 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently.

Claims 18 and 20

Appellant incorporates herein by reference the arguments presented above against the rejection of claim 5 under 35 U.S.C. §102(e) over Chai. Claims 6 and 8 depend from claim 5 and accordingly are allowable for at least this reason.

C. Rejection of Claims 3, 7, 11, 15, and 19 under 35 U.S.C. §103(a)

Claims 3, 7, 11, 15, and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chai in view of Zinser.

Claim 3

The Examiner rejected claim 3, stating that:

> Chai teaches everything claimed, as described above (See Claim 1). As stated in the rejection of claim 1, Chai teaches that an adjacent subband may be used to repair a corrupted subband (Col. 2, lines 9-27), but Chai does not specifically teach "that the reconstruction means are arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal."

Accordingly, Appellant incorporates hereafter the arguments presented above against the rejection of Claim 1 under 35 U.S.C. §102(e) over Chai, and submits that Claim 3 is allowable for at least the same reasons that base Claim 1 is allowable. In particular, Appellant submits that Chai does not teach a splitter for splitting up a single input signal on a single input line into at least first and second frequency band signals, a first encoder for encoding the first frequency band signal, and a second encoder for encoding the second frequency band signal, as recited in claim 1. Further, Chai fails to show a combiner for combining the first and second decoded frequency band signals, as recited in claim 1, where the first and second decoded frequency band signals are generated by separate decoders, as claimed in base claim 1.

One of the features of the present invention, as claimed in base claim 1, is the transmitter comprising a splitter for splitting up a single input signal on a single input line into at least first and second frequency band signals, a first encoder for encoding the first frequency band signal into a first encoded frequency band signal and a second encoder for encoding the second frequency band signal into a second encoded frequency band signal. Appellant submits that, in the current invention, in order for the first and second frequency band signals to be encoded by separate encoders, the splitter splits up the input signal prior to encoding of the frequency band

signals at the first and second encoders. A second feature of the present invention, as claimed in claim 1, is a first decoder for decoding the first encoded frequency band signal and a second decoder for decoding the second encoded frequency band signal, and a combiner for combining first and second decoded frequency band signals

Chai discloses that generation of hierarchical subband decomposed coefficients takes place at the encoders (Col. 3, lines 30-33). In the Advisory Action dated December 27, 2005, the Examiner asserted that the subband encoding step of Chai performs a necessary step of splitting a signal into frequency bands. According to the Examiner, "Chai teaches splitting of the input signal resulting in coefficients corresponding to separate bands, where... each of the sets of coefficients will undergo a separate formatting operation (encoding) during packetization (Pages 2-3 of the Advisory Action)." The Examiner therefore appears to argue that the input signal(s) of Chai undergoes splitting at encoders 220 and 222 (shown in Fig. 2), with subsequent encoding at packetizers 230.

Appellant notes that, as set forth in MPEP § 2173.05(a), "[I]t has been stated that consistent with the well-established axiom in patent law that a patentee is free to be his or her own lexicographer, a patentee may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings. Hormone Research Foundation Inc. v. Genentech Inc., 904 F.2d 1558, 15 USPQ2d 1039 (Fed. Cir. 1990)." Chai defines encoders 220 and 220 as devices "for receiving and encoding [audio or video] data into an elementary... bitstream (Col. 3, lines 28-30; 54-56)." Chai further defines packetizers 230 as devices where the elementary bitstreams generated by the encoders are converted into packets (Col. 3, lines 65-67). Thus, the term "packetizer," as used by Chai, is distinctly different from the term "encoder." Therefore,

Appellant argues that a step of packetization, as described by Chai, falls outside the meaning of encoding, as defined by Chai.

Since the packetizer is not an encoder within the meaning of Chai, any step of splitting of the input signal resulting in coefficients corresponding to separate bands clearly takes place at the encoder 220 of Chai (Col. 3, lines 28-44), and not prior to the encoders of Chai. Therefore, Chai fails to show a splitter for splitting up a single input signal on a single input line into at least first and second frequency band signals, a first encoder for encoding the first frequency band signal, and a second encoder for encoding the second frequency band signal, as recited in claim 1.

Further, Chai fails to show a combiner for combining the first and second decoded frequency band signals, as recited in claim 1, where the first and second decoded frequency band signals are generated by separate decoders. Chai discloses that a transport stream may be demultiplexed at a demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and 295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the

meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's specification as a device for decoding an encoded frequency band signal. Thus, the term "combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder, and would therefore, by implication, be reversed at a decoder. There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no suggestion to combine these signals into a single output. Therefore, Chai fails to show a first decoder for decoding the first frequency band signal, and a second decoder for decoding the second frequency band signal, with a combiner for combining at least first and second decoded frequency band signals, as recited in base claim 1.

Accordingly, Claim 1 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently. The Examiner relies upon the Zinser as a secondary reference for the rejection of Claim 3 under §103(a) to teach reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal. Appellant submits that this reference does not cure the deficiencies of Chai regarding either the splitter for splitting up a single input signal on a single input line into at least first and second frequency band signals, or the combiner for combining the first and second decoded frequency band signals. Accordingly, Claim 3 is also patentable over Chai in view of Zinser.

Claim 7

The Examiner rejected claim 7, stating that:

> Chai teaches everything claimed, as described above... Chai teaches that an adjacent subband may be used to repair a corrupted subband..., but Chai does not specifically teach "that the reconstruction means are arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal."

Accordingly, Appellant incorporates hereafter the arguments presented above against the rejection of claim 5 under 35 U.S.C. §102(e) over Chai, and submits that Claim 7 is allowable for at least the same reasons that base claim 5 is allowable.

One of the features of the present invention, as claimed in base claim 5, is the receiver comprising a first decoder for decoding the first encoded frequency band signal into a first

decoded frequency band signal and a second decoder for decoding the second encoded frequency band signal into a second decoded frequency band signal, the receiver further comprising a combiner for combining the first and second decoded frequency band signals into an output signal.

Chai fails to show a step of combining the first and second decoded frequency band signals, as recited in claim 5, where the first and second decoded frequency band signals are generated by separate decoders. Chai discloses that a transport stream may be demultiplexed at a demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and 295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's specification as a device for decoding an encoded frequency band signal. Thus, the term

"combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that decoded signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder which is capable of hierarchical subband decomposition (Col. 3, lines 28-34; Col. 4, lines 31-42), and would therefore, by implication, be reversed at a complementary decoder (Col. 8, lines 54-59). There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no suggestion to combine these signals into a single output. Therefore, Chai fails to show a first decoder for decoding the first frequency band signal, and a second decoder for the second frequency band signal, with a combiner for combining at least first and second decoded frequency band signals, as recited in base claim 5.

Accordingly, Claim 5 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently. The Examiner relies upon the Zinser as a secondary reference for the rejection of Claim 7 under §103(a) to teach reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded

frequency band signal. Appellant submits that this reference does not cure the deficiencies of Chai regarding the combiner for combining the first and second decoded frequency band signals. Accordingly, Claim 7 is also patentable over Chai in view of Zinser.

Claim 11

The Examiner rejected claim 11, stating that:

> Chai teaches everything claimed, as described above... Chai teaches that an adjacent subband may be used to repair a corrupted subband..., but Chai does not specifically teach "that the reconstruction means are arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal."

Accordingly, Appellant incorporates hereafter the arguments presented above against the rejection of claim 9 under 35 U.S.C. §102(e) over Chai, and submits that Claim 11 is allowable for at least the same reasons that base claim 9 is allowable.

One of the features of the present invention, as claimed in claim 9, is the method of transmitting a single input signal via a transmission channel. The method comprises the steps of splitting up the single input signal into at least first and second frequency band signals; and encoding the first frequency band signal into a first encoded frequency band signal and encoding the second frequency band signal into a second encoded frequency band signal. Appellant submits that, in the current invention, in order for the first and second frequency band signals to be separately encoded, the input signal must have been split up prior to encoding the first frequency band signal into a first encoded frequency band signal and encoding the second frequency band signal into a second encoded frequency band signal. A second feature of the

present invention, as claimed in claim 9, is a step of decoding the first encoded frequency band signal into a first decoded frequency band signal and decoding the second encoded frequency band signal into a second decoded frequency band signal (Page 7, lines 15-25), with a subsequent step combining the first and second decoded frequency band signals into an output signal

Chai discloses that generation of hierarchical subband decomposed coefficients takes place at the encoders (Col. 3, lines 30-33). In the Advisory Action dated December 27, 2005, the Examiner asserted that the subband encoding step of Chai performs a necessary step of splitting a signal into frequency bands. According to the Examiner, "Chai teaches splitting of the input signal resulting in coefficients corresponding to separate bands, where... each of the sets of coefficients will undergo a separate formatting operation (encoding) during packetization (Pages 2-3 of the Advisory Action)." The Examiner therefore appears to argue that the input signal(s) of Chai undergoes splitting at encoders 220 and 222 (shown in Fig. 2), with subsequent encoding at packetizers 230. Appellant submits that, in the current invention, in order for the first and second frequency band signals to be encoded by separate encoders, the splitter splits up the input signal prior to encoding of the frequency band signals at the first and second encoders.

Appellant notes that, as set forth in MPEP § 2173.05(a), "[I]t has been stated that consistent with the well-established axiom in patent law that a patentee is free to be his or her own lexicographer, a patentee may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings. Hormone Research Foundation Inc. v. Genentech Inc., 904 F.2d 1558, 15 USPQ2d 1039 (Fed. Cir. 1990)." Chai defines encoders 220 and 220 as devices "for receiving and encoding [audio or video] data into an elementary... bitstream (Col. 3, lines

28-30; 54-56)." Chai further defines packetizers 230 as devices where the elementary bitstreams generated by the encoders are converted into packets (Col. 3, lines 65-67). Thus, the term "packetizer," as used by Chai, is distinctly different from the term "encoder." Therefore, Appellant argues that a step of packetization, as described by Chai, falls outside the meaning of encoding, as defined by Chai.

Since the packetizer is not an encoder within the meaning of Chai, any step of splitting of the input signal resulting in coefficients corresponding to separate bands clearly takes place at the encoder 220 of Chai (Col. 3, lines 28-44), and not prior to the encoders of Chai. Therefore, Chai fails to show a step of splitting up a single input signal on a single input line into at least first and second frequency band signals, a step of encoding the first frequency band signal, and a second step of encoding the second frequency band signal, as recited in claim 9.

Further, Chai fails to show a combiner for combining the first and second decoded frequency band signals, as recited in claim 9, where the first and second decoded frequency band signals are generated by separate decoders. Chai discloses that a transport stream may be demultiplexed at a demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and 295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's specification as a device for decoding an encoded frequency band signal. Thus, the term "combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder, and would therefore, by implication, be reversed at a decoder. There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no suggestion to combine these signals into a single output. Therefore, Chai fails to show a first decoder for decoding the first frequency band signal, and a second decoder for decoding the

second frequency band signal, with a combiner for combining at least first and second decoded frequency band signals, as recited in claim 9.

Accordingly, Claim 9 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently. The Examiner relies upon the Zinser as a secondary reference for the rejection of Claim 11 under §103(a) to teach reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal. Appellant submits that this reference does not cure the deficiencies of Chai regarding either the steps of splitting up the single input signal into at least first and second frequency band signals; or combining the first and second decoded frequency band signals into an output signal. Accordingly, Claim 11 is also patentable over Chai in view of Zinser.

Claim 15

The Examiner rejected claim 15, stating that:

> Chai teaches everything claimed, as described above... Chai teaches that an adjacent subband may be used to repair a corrupted subband..., but Chai does not specifically teach "that the reconstruction means are arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal."

Accordingly, Appellant incorporates hereafter the arguments presented above against the rejection of claim 13 under 35 U.S.C. §102(e) over Chai, and submits that Claim 15 is allowable for at least the same reasons that base claim 13 is allowable.

One of the features of the present invention, as claimed in claim 13, is a method of receiving, via a transmission channel, first and second encoded frequency band signals derived from a single input signal. The method, as claimed in claim 13, comprises the steps of decoding the first encoded frequency band signal into a first decoded frequency band signal and decoding the second encoded frequency band signal into a second decoded frequency band signal (Page 7, lines 15-25); and combining the first and second decoded frequency band signals into an output signal (Page 6, lines 12-14).

Contrary to the Examiner's assertion, Chai fails to show a step of combining the first and second decoded frequency band signals, as recited in claim 13, where the first and second decoded frequency band signals are generated in separate decoding steps. Chai discloses that a transport stream may be demultiplexed at a demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and 295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the

prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's specification as a device for decoding an encoded frequency band signal. Thus, the term "combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder, and would therefore, by implication, be reversed at a decoder. There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no suggestion to combine these signals into a single output. Therefore, Chai fails to show a step of decoding the first frequency band signal, and a step of for decoding the second frequency band signal, with a step of combining at least first and second decoded frequency band signals, as recited in claim 13.

Accordingly, Claim 13 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently. The Examiner relies

upon the Zinser as a secondary reference for the rejection of Claim 15 under §103(a) to teach reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal. Appellant submits that this reference does not cure the deficiencies of Chai regarding the step of combining the first and second decoded frequency band signals into an output signal. Accordingly, Claim 15 is also patentable over Chai in view of Zinser.

Claim 19

The Examiner rejected claim 19, stating that:

> Chai teaches everything claimed, as described above... Chai teaches that an adjacent subband may be used to repair a corrupted subband..., but Chai does not specifically teach "that the reconstruction means are arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal."

Accordingly, Appellant incorporates hereafter the arguments presented above against the rejection of claim 17 under 35 U.S.C. §102(e) over Chai, and submits that Claim 19 is allowable for at least the same reasons that base claim 17 is allowable.

One of the features of the present invention, as claimed in claim 17, is the speech decoder comprising a first decoder for decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder for decoding the second encoded frequency band signal into a second decoded frequency band signal. The speech decoder further comprises a combiner for combining the first and second decoded frequency band speech signals into an output signal

Chai fails to show a combiner for combining the first and second decoded frequency band signals, as recited in claim 1, where the first and second decoded frequency band signals are generated by separate decoders. Chai discloses that a transport stream may be demultiplexed at a demultiplexor 260, to produce elementary streams which serve as inputs to separate decoders 270 and 290, which output decoded signals 275 and 295 (See Fig. 2; Col. 4, lines 14-22).

In the Office Action dated October 20, 2005, the Examiner asserted on page 3 that Chai showed a first decoder and a second decoder in Fig. 2, items 260, 270, and 290; and a combiner for combining frequency band signals into an output signal (See Fig. 2, items 270, 275, 290, and 295; Col. 4, lines 14-22). In view of this, the Examiner appears to argue that items 270 and 290 function both as decoders and as combiners.

Appellant notes that, as set forth in MPEP §2110.01 "Appellant may be own lexicographer" and as set forth in MPEP §2173.05(a): "When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the Appellant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989)." In the present application, a combiner is defined in the Appellant's specification as a device for combining two decoded frequency band signals into an output signal; and a decoder is defined in the Appellant's specification as a device for decoding an encoded frequency band signal. Thus, the term "combiner," as used in the current application, is distinctly different from the term "decoder," and the combiner acts on a signal which is output from a decoder (Page 5, line 32-Page 6, line 4). In view of this, Appellant respectfully submits that the Examiner is in error in referencing decoders 270 and 290 of Chai as also being combiners. A review of Chai fails to show that

signals 275 and 290 leaving decoders 270 and 290 are combined, and the cited text fails to reference any combiner, or any combination step.

In the Advisory Action dated December 27, 2005, the Examiner asserted that video and audio signals were decomposed prior to transmission, and would inherently need to be recomposed (Page 4 of the Advisory Action). However, such decomposition takes place at an encoder, and would therefore, by implication, be reversed at a complementary decoder. There is no teaching within Chai that the outputs of two separate decoders would be recomposed at a combiner. Each decoder of Chai generates a single output signal (Col. 4, lines 14-22; Fig. 2); there is no suggestion to combine these signals into a single output. Therefore, Chai fails to show a first decoder for decoding the first frequency band signal, and a second decoder for decoding the second frequency band signal, with a combiner for combining at least first and second decoded frequency band signals, as recited in claim 17.

Accordingly, Claim 17 is patentable over Chai because Chai does not describe each and every element as set forth in the claim, neither expressly nor inherently. The Examiner relies upon the Zinser as a secondary reference for the rejection of Claim 19 under §103(a) to teach reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal. Appellant submits that this reference does not cure the deficiencies of Chai regarding the combiner for combining the first and second decoded frequency band signals. Accordingly, Claim 19 is also patentable over Chai in view of Zinser.

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VIII. CONCLUSION

Appellant submits that all the claims on appeal are patentable because they are neither anticipated nor suggested by the cited art references. Accordingly, reversal of all the rejections and allowance of all the claims submitted on appeal is respectfully solicited.

Respectfully submitted,

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3/9/2006
Date

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CLAIMS APPENDIX

Claim 1. A transmission system (10) comprising a transmitter (12) for transmitting an input signal to a receiver (14) via a transmission channel (16), the transmitter (12) comprising a splitter (20) for splitting up a single input signal on a single input line into at least first and second frequency band signals, the transmitter (12) further comprising a first encoder (22) for encoding the first frequency band signal into a first encoded frequency band signal and a second encoder (24) for encoding the second frequency band signal into a second encoded frequency band signal, the transmitter (12) being arranged for transmitting the first and second encoded frequency band signals via the transmission channel (16) to the receiver (14), the receiver (14) comprising a first decoder (26) for decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder (28) for decoding the second encoded frequency band signal into a second decoded frequency band signal, the receiver (14) further comprising a combiner (30) for combining the first and second decoded frequency band signals into an output signal, the receiver (14) further comprising reconstruction means (48) for reconstructing the second decoded frequency band signal when he second decoded frequency band signal is not available, characterised in that the reconstruction means (48) are arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band signal.

Claim 2. The transmission system (10) according to claim 1, characterised in that the reconstruction means (48) are arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band signal by extending a bandwidth of the first decoded frequency band signal.

Claim 3. The transmission system (10) according to claim 1, characterised in that the reconstruction means (48) are arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal.

Claim 4. The transmission system (10) according to claim 1, characterised in that the first frequency band signal and the first encoded frequency band signal and the first decoded frequency band signal are signals having a low frequency band and in that the second frequency band signal and the second encoded frequency band signal and the second decoded frequency band signal are signals having a high frequency band.

Claim 5. A receiver (14) for receiving, via a transmission channel (16), first and second encoded frequency band signals derived from a single input signal from a transmitter (12), the receiver (14) comprising a first decoder (26) for decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder (28) for decoding the second encoded frequency band signal into a second decoded frequency band signal, the receiver (14) further comprising a combiner (30) for combining the first and second decoded frequency band signals into an output signal, the receiver (14) further comprising reconstruction means (48) for reconstructing the second decoded frequency band signal when the second decoded frequency band signal is not available, characterised in that the reconstruction means (48) are arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band signal.

Claim 6. The receiver (14) according to claim 5, characterised in that the reconstruction means (48) are arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band signal by extending a bandwidth of the first decoded frequency band signal.

Claim 7. The receiver (14) according to claim 5, characterised in that the reconstruction means (48) are arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal.

Claim 8. The receiver (14) according to claim 5, characterised in that the first encoded frequency band signal and the first decoded frequency band signal are signals having a low frequency band and in that the second encoded frequency band signal and the second decoded frequency band signal are signals having a high frequency band.

Claim 9. A method of transmitting a single input signal via a transmission channel (16), the method comprising:

- splitting up the single input signal into at least first and second frequency band signals,
- encoding the first frequency band signal into a first encoded frequency band signal and encoding the second frequency band signal into a second encoded frequency band signal,
- transmitting the first and second encoded frequency band signals via the transmission channel (16),
- decoding the first encoded frequency band signal into a first decoded frequency band signal and decoding the second encoded frequency band signal into a second decoded frequency band signal,
- combining the first and second decoded frequency band signals into an output signal,
- reconstructing the second decoded frequency band signal when the second decoded frequency band signal is not available, characterised in that the second decoded frequency band signal is reconstructed from the first decoded frequency band signal.

Claim 10. The method of transmitting an input signal via a transmission channel (16) according to claim 9, characterised in that the second decoded frequency band signal is reconstructed from the first decoded frequency band signal by extending a bandwidth of the first decoded frequency band signal.

Claim 11. The method of transmitting an input signal via a transmission channel (16) according to claim 9, characterised in that a present frame of the second decoded frequency band signal is reconstructed from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal.

Claim 12. The method of transmitting an input signal via a transmission channel (16) according to claim 9, characterised in that the first frequency band signal and the first encoded frequency band signal and the first decoded frequency band signal are signals having a low frequency band and in that the second frequency band signal and the second encoded frequency band signal and the second decoded frequency band signal are signals having a high frequency band.

Claim 13. A method of receiving, via a transmission channel (16), first and second encoded frequency band signals derived from a single input signal, the method comprising:

- decoding the first encoded frequency band signal into a first decoded frequency band signal and decoding the second encoded frequency band signal into a second decoded frequency band signal,
- combining the first and second decoded frequency band signals into an output signal,
- reconstructing the second decoded frequency band signal when the second decoded frequency band signal is not available, characterised in that the second decoded frequency band signal is reconstructed from the first decoded frequency band signal.

Claim 14. The method of receiving, via a transmission channel (16), first and second encoded frequency band signals according to claim 13, characterised in that the second decoded frequency band signal is reconstructed from the first decoded frequency band signal by extending a bandwidth of the first decoded frequency band signal.

Claim 15. The method of receiving, via a transmission channel (16), first and second encoded frequency band signals according to claim 13, characterised in that a present frame of the second decoded frequency band signal is reconstructed from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal.

Claim 16. The method of receiving, via a transmission channel (16), first and second encoded frequency band signals according to claim 13, characterised in that the first encoded frequency band signal and the first decoded frequency band signal are signals having a low frequency band and in that the second encoded frequency band signal and the second decoded frequency band signal are signals having a high frequency band.

Claim 17. A speech decoder (60) for decoding first and second encoded frequency band speech signals derived from a single input signal, the speech decoder (60) comprising a first decoder (26) for decoding the first encoded frequency band speech signal into a first decoded frequency band speech signal and a second decoder (28) for decoding the second encoded frequency band speech signal into a second decoded frequency band speech signal, the speech decoder (60) further comprising a combiner (30) for combining the first and second decoded frequency band speech signals into an output signal, the speech decoder (60) further comprising reconstruction means (48) for reconstructing the second decoded frequency band speech signal when the second decoded frequency band signal is not available, characterised in that reconstruction means (48) are arranged for reconstructing the second decoded frequency band speech signal from the first decoded frequency band speech signal.

Claim 18. The speech decoder (60) according to claim 17, characterised in that the reconstruction means (48) are arranged for reconstructing the second decoded frequency band speech signal from the first decoded frequency band speech signal by extending a bandwidth of the first decoded frequency band speech signal.

Claim 19. The speech decoder (60) according to claim 17, characterised in that the reconstruction means (48) are arranged for reconstructing a present frame of the second decoded frequency band speech signal from a present frame of the first decoded frequency band speech signal and from a previous frame of the second decoded frequency band speech signal.

Claim 20. The speech decoder (60) according to claim 17, characterised in that the first encoded frequency band speech signal and the first decoded frequency band speech signal are signals having a low frequency band and in that the second encoded frequency band speech signal and the second decoded frequency band speech signal are signals having a high frequency band.

EVIDENCE APPENDIX

Listing and copies of evidence relied upon by the Examiner as to grounds of rejection to be reviewed on Appeal:

1. US Patent No. 6,137,915 to Chai et al.

2. US Patent No. 5,384,793 to Zinser et al.

RELATED PROCEEDINGS APPENDIX

None.